

Attorney Docket No: 37838-0009

Serial No: Unassigned

Inventors: Herbert GORD et al.

A1 Sub 11/14
pressurized, supported and slightly stretched in a transversal manner by compressed air. The film tube (10) is filled with an inner bath solution (31) via a supply tube (18). An idle roller (13) is situated near the bottom of the spinning vat (12) in order to guide the film tube (10) around and, afterwards, out of the spinning vat (12) in an upward sloping manner. The film tube is laid flat along a contact section (27) of the idle roller (13).--

IN THE SPECIFICATION

Please amend the present specification by the following:

Page 1

After the title insert the heading -- BACKGROUND OF THE INVENTION --;

After "BACKGROUND OF THE INVENTION", insert -- "Field of the Invention --;

A2
~~Line 4, delete the paragraph in its entirety and insert paragraph~~ The invention relates to a method and an apparatus for the manufacture of a tube made of film on a cellulose basis, which an insert reinforces, by extruding an aqueous solution of cellulose-N-methyl-morpholin-N-oxide (NMMO) onto the insert, which is drawn from a roll and formed to a tube with an overlapping longitudinal seam.--; and

Line 7, insert the heading -- Description of Related Art --

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A3
~~After line 24, insert paragraphs~~ Document GB-A 1,042,182 describes a method for the production of a film tube on a cellulose basis reinforced by an insert by extruding a cellulose-NMMO solution onto the insert, the insert being drawn from a roll. The insert is formed into a tube with an overlapping longitudinal seam, the seam not being cemented. This tube is treated inside and out with a viscose solution.

Document DE-A 1 952 464 describes an apparatus for coating and imbibing a paper

tube with polyvinyl alcohol resin. The paper tube is formed from a paper web. A cementing apparatus for cementing the overlapping longitudinal seam is not provided. Neither is any preheating of the paper web before it is coated with the polyvinyl alcohol resin performed.

A³ In the document WO-A 95/07811 an apparatus is described for the production of tubes by extruding a cellulose-NMMO solution. The tubes are pure cellulose casings, but not so-called fiber casings in which a fiber insert strengthens the tube. The apparatus for the production of the tube is designed so that the tube can be cooled inside and out with air, so that the NMMO solution solidifies rapidly. The cooling air is by no means supporting air that is introduced into the interior of the film tube.--

Page 3

Line 18, insert heading --SUMMARY OF THE INVENTION--;

A⁴ Line 19, delete paragraph in its entirety and insert paragraph --The invention is therefore addressed to the problem of designing a method and an apparatus so that they will be suitable for coating inserts formed into a tube with cellulose-NMMO solutions and permit a uniform penetration of the inserts with cellulose-NMMO solutions.--; and

A⁵ Line 23, delete paragraph in its entirety and insert paragraph --This problem is solved by the invention in that the tube passes through a heating section situated ahead of the nozzle block and in communication therewith, in which the insert is preheated with hot air to the temperature of the extruded cellulose-NMMO solution, then the seam is cemented with straight NMMO or cellulose-NMMO solution and the tube is then carried through the nozzle block in which the cellulose-NMMO solution is applied to the tube and penetrates it to obtain an insert-reinforced film tube, that the interior of the film tube is filled with an aqueous NMMO solution, and that the film tube exits the nozzle block and enters a spin bath, is turned around in the latter, and is carried out of it.--

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Line 4, insert heading --Detailed Description of a Preferred Embodiment--;

A⁶
~~Line 5, delete paragraph in its entirety and insert paragraph~~--In an embodiment of the process, after it is drawn from the roll, emulsifiers, wetting agents and/or anchoring agents are applied by one of the known methods such as roller application. An appropriately pressure-controlled supporting air is blown into the interior of the film tube after it leaves the nozzle block--; and

A⁷
~~Line 21, delete paragraph in its entirety and insert paragraph~~--As a variant of this process it is also possible, instead of passing through a tub filled with the spin bath, to apply the spin bath directly internally and externally onto the film tube, through ring nozzles for example, as is described in EP-A 0 006 601. The spin bath level is then lowered inside and out to the top edge of the spin tub's deflector roll.--

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A⁸
~~Line 4, delete paragraph in its entirety and insert paragraph~~--The apparatus for producing a film tube on a cellulose basis, which the insert reinforces, by extruding an aqueous cellulose-N-methyl-morpholin-N-oxide-(NMMO) solution onto the insert, with a nozzle block and a spin bath, is characterized in that a supply roll for the insert, a deflector roll, and a forming section in which the insert is formed into a tube with an overlapping longitudinal seam, are present, that a preheating system for the tube is disposed ahead of the nozzle block, that the preheating system is connected by hot air ducts and an exhaust duct is connected with a controllable heater out of which air heated in the circuit flows into the preheating system, and from which cooled air flows back into the heater, and that the tube runs through the nozzle block which is preceded by a cementing system for cementing the longitudinal seam of the tube and which contains a ring nozzle out of the nozzle gap of which the cellulose-NMMO solution is applied to the tube preheated to the temperature of the extrusion solution in order to complete the

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formation of the film tube. In further embodiment of the apparatus, the insert is selected from the group, paper, nonwoven, fiber fleece, fiber paper, the fibers being especially long hemp fibers~~---~~; and]

A⁸ [Line 18, delete paragraph in its entirety and insert paragraphs] In embodiment of the apparatus, after the insert is drawn from the supply roll an applicator system is attached, with which additives such as emulsifiers, wetting and/or anchoring agents can be applied to the insert and can be dried in the following hot open air section.

It is also possible that the preheating system is not required in every case, so that in certain manufacturing procedures it remains shut off.--

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A⁹ Line 1, delete paragraph in its entirety and insert paragraph]-- In an embodiment of the invention, the nozzle block contains a ring nozzle which is heated by a heating medium, and a delivery tube and a removal tube for the aqueous NMMO solution, plus a duct for supporting air for the film tube, are brought centrally through an annular gauging disk which is arranged concentrically with the ring nozzle in the interior of the film tube and forms with the latter an annular gap through which the film tube passes~~---~~; and

A¹⁰ Line 7, delete line in its entirety and insert [The annular gauging disk is connected with the heating circuit for heating.--

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A¹¹ Line 14, delete paragraph in its entirety and insert paragraph]-- The insert 3, which is paper, nonwoven, fiber paper or fiber fleece wherein the fibers are preferably hemp fibers, is drawn from the supply roll 2 and carried over the deflector roll 4. The fiber paper and the fiber fleece are solidified wet when manufactured, by being impregnated with dilute viscose, cellulose acetate solution or plastic washes. In these embodiments the insert 3 is used with preference. Ahead of the deflector roll 4 is an applicator 39